AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method for the heat treatment of solids containing iron oxide, in which fine-grained solids are heated to a temperature of about 450 to 950°C in a fluidized-bed reactor ~~(1)~~, ~~**characterized in that**~~ wherein a first gas or gas mixture is introduced from below into a mixing chamber region ~~(7)~~ of the reactor ~~(1)~~ through a preferably central gas supply tube ~~(3)~~, the gas supply tube ~~(3)~~ being at least partly surrounded by a stationary annular fluidized bed ~~(10)~~ which is fluidized by supplying fluidizing gas, and ~~that~~ the gas velocities of the first gas or gas mixture and of the fluidizing gas for the annular fluidized bed ~~(10)~~ are adjusted such that the Particle-Froude-Numbers in the gas supply tube ~~(3)~~ are between 1 and 100, in the annular fluidized bed ~~(10)~~ between 0.02 and 2, and in the mixing chamber ~~(7)~~ between 0.3 and 30.

2. (Currently Amended) The method as claimed in claim 1, ~~**characterized in that**~~ wherein the Particle-Froude-Number in the gas supply tube ~~(3)~~ is between 1.15 and 20, in particular about 10.6.

3. (Currently Amended) The method as claimed in claim 1 ~~or 2, **characterized in that**~~ wherein the Particle-Froude-Number in the annular fluidized bed ~~(10)~~ is between 0.115 and 1.15, in particular about 0.28.

4. (Currently Amended) The method as claimed in ~~any of the preceding claims, **characterized in that**~~ claim 1, wherein the Particle-Froude-Number in the mixing chamber ~~(7)~~ is between 0.37 and 3.7, in particular about 1.1.

5. (Currently Amended) The method as claimed in ~~any of the preceding claims, **characterized in that**~~ claim 1, wherein the bed height of solids in the reactor ~~(1)~~ is adjusted such that the annular fluidized bed ~~(10)~~ at least partly extends beyond the upper orifice end of the gas supply tube ~~(3)~~ and ~~that~~ solids are constantly introduced into the first gas or gas mixture and are entrained by the gas stream to the mixing chamber ~~(7)~~ located above the orifice region of the gas supply tube ~~(3)~~.

6. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein iron-oxide-containing ore, in particular iron ore or iron ore concentrate is used as starting material.

7. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein the fluidizing gas introduced into the annular fluidized bed ~~(10)~~ of the reactor ~~(1)~~ is a preheated reduction gas which contains at least 80 % hydrogen, in particular more than 90 % hydrogen.

8. (Currently Amended) The method as claimed in claim 7, ~~characterized in that~~ wherein the reduction gas is cleaned in a reprocessing stage ~~(31, 32, 33, 34, 35)~~ downstream of the reactor ~~(1)~~ and is subsequently recirculated to the reactor ~~(1)~~.

9. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein downstream of the reactor ~~(1)~~ another fluidized-bed reactor ~~(23)~~ is provided, whose exhaust gases are separated from solids in a separator ~~(27)~~ and are introduced into the gas supply tube ~~(3)~~ of the reactor ~~(1)~~.

10. (Currently Amended) The method as claimed in ~~any of the preceding claims, characterized in that~~ claim 1, wherein upstream of the reactor ~~(1)~~ at least one preheating stage ~~(12, 13, 14, 15)~~ is provided for heating the solids.

11. (Currently Amended) A plant for the heat treatment of solids containing iron oxide, in particular for performing a method as claimed in ~~any of claims 1 to 10,~~ claim 1, comprising a reactor ~~(1)~~ constituting a fluidized bed reactor, ~~characterized in that~~ wherein the reactor ~~(1)~~ has a gas supply system which is formed such that gas flowing through the gas supply system entrains solids from a stationary annular fluidized bed ~~(10)~~, which at least partly surrounds the gas supply system, into the mixing chamber ~~(7)~~.

12. (Currently Amended) The plant as claimed in claim 11, ~~characterized in that~~ wherein the gas supply system has at least one gas supply tube ~~(3)~~ which extends upwards substantially vertically from the lower region of the reactor ~~(1)~~ into a mixing chamber ~~(7)~~ of the reactor ~~(1)~~, the gas supply tube ~~(3)~~ being at least partly surrounded by an annular chamber in which the stationary annular fluidized bed ~~(10)~~ is formed.

13. (Currently Amended) The plant as claimed in claim 12, ~~characterized in that~~ wherein the gas supply tube ~~(3)~~ is arranged approximately centrally with reference to the cross-sectional area of the reactor ~~(1)~~.

14. (Currently Amended) The plant as claimed in ~~any of claims 11 to 13, characterized in that~~ claim 11, wherein the gas supply tube ~~(3)~~ has openings, for instance in the form of slots, at its shell surface.

15. (Currently Amended) The plant as claimed in ~~any of claims 11 to 14, characterized in that~~ claim 11, wherein a cyclone ~~(9)~~ for separating solids is provided downstream of the reactor ~~(1)~~, and ~~that~~ the cyclone ~~(9)~~ has a solids conduit ~~(22)~~ leading to the annular fluidized bed ~~(10)~~ of the reactor (1).

16. (Currently Amended) The plant as claimed in ~~any of claims 11 to 15, characterized in that~~ claim 11, wherein in the annular chamber of the reactor ~~(1)~~ a gas distributor ~~(5)~~ is provided, which divides the chamber into an upper fluidized bed region ~~(10)~~ and a lower gas distributor chamber ~~(4)~~, and ~~that~~ the gas distributor chamber ~~(4)~~ is connected with a supply conduit ~~(6)~~ for fluidizing gas.

17. (Currently Amended) The plant as claimed in ~~any of claims 11 to 16, characterized in that~~ claim 11, wherein the reactor ~~(1)~~ has a supply conduit for hydrogen-containing reduction gas, which leads to the gas supply tube ~~(3)~~ and is connected for instance with the exhaust gas outlet of a separator ~~(27)~~ of another reactor ~~(23)~~ downstream of the reactor ~~(1)~~, and/or has a supply conduit for preheated hydrogen-containing reduction gas, which leads to the annular chamber.

18. (Currently Amended) The plant as claimed in ~~any of claims 11 to 17, characterized in that~~ claim 11, wherein a preheating stage ~~(12, 13, 14, 15)~~ for the solids is provided upstream of the reactor ~~(1)~~.